

Appl. No. 10/692,637  
Amdt. dated January 25, 2007  
Reply to Office action of 9/26/06

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-6 remain in the application and are subject to examination. Claim 1 has been amended. No claims have been added or canceled.

In item 3 on pages 3-5 of the above-identified Office action, claims 1, 2, 4 and 6 have been rejected as being unpatentable over Japanese Patent JP 7-43486 in view of European Application EP 0 557 085 A1 and U.S. Patent No. 4,692,302 to DeMario et al. (hereinafter DeMario), under 35 U.S.C. § 103(a).

In item 4 on page 5 of the Office action, claim 5 has been rejected as being unpatentable over JP 7-43486 in view of EP 0 557 085 A1 and DeMario and further in view of U.S. Patent No. 6,744,843 to Kang et al. (hereinafter Kang), under 35 U.S.C. § 103(a).

In item 5 on pages 5-6 of the Office action, claim 6 has been rejected as being unpatentable over JP 7-43486 in view of EP 0 557 085 A1 and DeMario and further in view of Japanese Publication No. JP 02002980, under 35 U.S.C. § 103(a).

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The rejections have been noted and the explanations of the rejections by the Examiner are appreciated. Although it is believed that the claims were distinguished over the prior art in their previous form, in order to make this even clearer, claim 1 has been amended. Support for the changes is found in the Drawings and the Specification of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a spacer for a fuel assembly of a boiling water reactor, comprising:

a frame formed with outer webs and inner webs oriented crossways with respect to one another;

gills formed on an outer side of said outer webs and projecting outward to a given extent from said outer side;

a plurality of projections each formed by an outward bulge in a wall of said outer webs, said projections each having a lower edge extending to and being identical with a lower edge of a respective one of said outer webs and projecting outwardly to a greater extent than said given extent of said gills, said projections being disposed in a region of a respective said inner web; and

a deflector lug formed integrally on a lower edge of said projections.

Thus, claim 1 as amended now calls for:

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gills formed on an outer side of said outer webs and  
projecting **outward** to a given extent from said outer side;  
and

a plurality of projections each formed by **an outward** bulge in  
a wall of said outer webs, **said projections each having a  
lower edge extending to and being identical with a lower edge  
of a respective one of said outer webs** and projecting  
outwardly to a greater extent than said given extent of said  
gills.

1. In "Response to Arguments," item 1 on page 2 of the Office  
Action, the Examiner has stated that the disagreement in  
interpretation between the Examiner and Applicant is based on  
an unjustifiably narrow interpretation of the structural  
feature in claim 1 calling for "integrally on a lower edge".  
Furthermore, as can be gleaned from item 3; second paragraph  
on page 4 of the Office Action, the Examiner believes that  
the quoted limitation is met by the embodiment according to  
Fig. 2b in JP 7-43486.

The spacers are shown in Fig. 2b in their installed state, as  
in all of the side views of the JP 7-43486 reference. In  
that configuration, the fuel rods 5 run vertically and  
everything that is at the top in the drawings is also at the

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top and the bottom in the installed state. Even though there are deflector lugs 13 present at the top of the spacer they are, however, formed integrally at the upper edge of an outer web and not at any edge of a projection, as in the invention of the instant application as claimed, and definitely not at a lower edge of a projection.

In order to even more clearly distinguish over the JP 7-43486 reference, claim 1 has been amended to call for:

a plurality of projections each formed by an outward bulge in a wall of said outer webs, and

said projections each having a lower edge extending to and being identical with a lower edge of a respective one of said outer webs,

as can be seen in Fig. 2 of the instant application.

This wording is believed to be clearly novel and non-obvious over the JP 7-43486 reference.

2. With respect to the limitation of claim 1 calling for the projections projecting outwardly to a greater extent than the given extent of the gills, the Examiner is of the opinion that such a limitation reads on element 23 of Fig. 7 of JP 7-43486. It is Applicants' opinion that the previous wording of claim 1 of the instant application did not allow such an interpretation. However, in order to make the differences

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between the prior art and claim 1 even clearer, the claim now calls for:

gills formed on an outer side of said outer webs and projecting **outward** to a given extent from said outer side.

This wording is also believed to be clearly novel and non-obvious over the JP 7-43486 reference.

3. EP 0 557 085 A1 discloses a spacer having projections at the outer side of its outer webs. The projections 45-48 are greater at two outer webs 33, 34 (see Fig. 6) adjacent two edges, than projections 41-44 at the other two outer webs 31, 32. Springs 61-64 are additionally present at the outer webs 31, 32. The springs hold the spacer in a centered position, so that the greater projections 45-48 are pressed against the inner wall of the fuel assembly channel. The spring elements 61-64 are leaf springs which, when a fuel assembly is inserted into a fuel assembly channel, could not fulfill the protective function for the gills in accordance with the present invention because they would be compressed by the upper edge of the fuel assembly channel in radial direction during insertion of a fuel assembly into a fuel assembly channel, so that the gills present at the outer sides of the outer webs could collide with the edge of the water box or

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rub against its inner walls. Besides that, projections, which serve for protecting the gills, must be present at all four outer webs, not just at two, which is the case in claim 1 of the instant application calling for gills and projections formed on said outer webs.

4. In summary, clearly, neither JP 7-43486 nor EP 0 557 085 Al nor DeMario nor Kang nor JP 02002980 show gills formed on an outer side of outer webs and projecting outward to a given extent from the outer side, and a plurality of projections each formed by an outward bulge in a wall of the outer webs, the projections each having a lower edge extending to and being identical with a lower edge of a respective one of the outer webs and projecting outwardly to a greater extent than the given extent of gills, as recited in claim 1 of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

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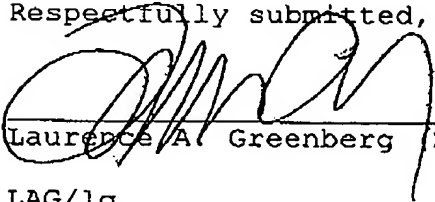
In view of the foregoing, reconsideration and allowance of claims 1-6 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section 1.136(a) in the amount of \$120.00 in accordance with Section 1.17 is enclosed herewith.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to Deposit Account Number 12-1099 of Lerner Greenberg Stemer LLP.

Respectfully submitted,



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LAG/lq

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